

What is claimed is:

1. A fabrication method of a semiconductor device comprising:

arranging a plurality of linear leadframes side by side separately from each other;

mounting a plurality of semiconductor chips having a first main surface with a plurality of electrode pads and a second main surface facing the first main surface, each of the semiconductor chips placed over the plurality of the linear leadframes and separated from each other in a direction of extending the linear leadframes with the second main surface of each of the semiconductor chips thereon;

joining the plurality of the electrode pads to the plurality of the linear leadframes with bonding wires;

forming an encapsulation part for encapsulating the semiconductor chip and the bonding wire and an interframe encapsulation part for burying a space between the adjacent linear leadframes exposed outside the encapsulation part;

forming a groove part for cutting all the linear leadframes placed right under the second main surface in a vertical direction to the direction of extending the linear leadframes; and

cutting the leadframes and the interframe encapsulation parts exposed between the plurality of the semiconductor chips to separate into a semiconductor device having the semiconductor

chip, a first external terminal row and a second external terminal row facing each other as sandwich the groove part.

2. The fabrication method of the semiconductor device according to claim 1, wherein the mounting is conducted by exposing outermost leadframes on both sides among the plurality of the linear leadframes arranged side by side, and

the joining does not join the bonding wires to the outermost leadframes.

3. A fabrication method of a semiconductor device comprising:

arranging a plurality of linear leadframes side by side separately from each other;

mounting a plurality of semiconductor chips having a first main surface with a plurality of electrode pads and a second main surface facing the first main surface, each of the semiconductor chips placed over the plurality of the linear leadframes and separated from each other in a direction of extending the linear leadframes with the second main surface of each of the semiconductor chips thereon;

joining the plurality of the electrode pads to the plurality of the linear leadframes with bonding wires;

forming an encapsulation layer for encapsulating the plurality of the semiconductor chips and the bonding wires joined to each of the plurality of the semiconductor chips;

forming a groove part for cutting all the linear leadframes

placed right under the second main surface in a vertical direction to the direction of extending the linear leadframes; and

cutting the encapsulation layer and the leadframes between the plurality of the semiconductor chips to separate into a semiconductor device formed of the semiconductor chip and the remaining leadframes having a first external terminal row and a the second external terminal row facing each other as sandwich the groove part, the rows exposed from a section generated by cutting.

4. The fabrication method of the semiconductor device according to claim 3, wherein the mounting is conducted by exposing outermost leadframes on both sides among the plurality of the linear leadframes arranged side by side, and

the joining does not join the bonding wires to the outermost leadframes.

5. A semiconductor device comprising:

a plurality of first external terminals disposed separately from each other;

a plurality of second external terminals separate from the first external terminals on an extension of the first external terminals;

a semiconductor chip having a plurality of electrode pads and mounted on the first and second external terminals;

a plurality of bonding wires for joining the plurality

of the electrode pads to each of the first and second external terminals;

an encapsulation part for encapsulating the semiconductor chip and the bonding wires; and

a frame encapsulation part for encapsulating between the first external terminals and between the second external terminals.

6. The semiconductor device according to claim 5, wherein the encapsulation part and the frame encapsulation part are formed in one piece.

7. The semiconductor device according to claim 5, wherein the plurality of the first external terminals are separated in stripes.